STRUCTURE FOR WATER CONTROL

(No.)

Code 587

Natural Resources Conservation Service
Conservation Practice Standard

I. Definition

A structure in an irrigation, drainage, or other water management systems that conveys water, controls the direction or rate of flow, or maintains a desired water surface elevation.

II. Purpose

To control the stage, discharge, distribution, delivery, or direction of flow of water in open channels or water use areas. It is also used for water quality control, such as sediment reduction or temperature regulation. These structures are also used to protect fish and wildlife and other natural resources.

III. Conditions Where Practice Applies

This practice applies wherever a permanent structure is needed as an integral part of an irrigation, drainage, or other water-control systems to serve one or more of the following functions:

- To conduct water from one elevation to a lower elevation within, to, or from a ditch or channel.
- To keep trash, debris, or weed seeds from entering pipelines.
- To control the direction of channel flow resulting from high water or backflow from flooding.
- To control the level of a water table or to remove surface or subsurface water from adjoining land, to flood land for frost protection or to manage water levels for wildlife or recreation.
- To provide water control for recreation or similar purposes.
- To convey water over, under, or along a ditch, road, railroad, or other barriers.
- To modify water flow to provide habitat for fish, wildlife, and other aquatic animals.
- This practice does not apply to NRCS Field Office Technical Guide (FOTG), Section IV, Standards 606, Subsurface Drain, or 410, Grade Stabilization Structure.

IV. Federal, State, and Local Laws

Users of this standard should be aware of potentially applicable federal, state, and local laws, rules, regulations, or permit requirements governing structures for water control. This standard does not contain the text of federal, state, or local laws.

V. Criteria

The following criteria apply to all purposes.

A. General

Structures shall be designed on an individual job basis, or applicable NRCS standard drawings shall be adapted to meet site conditions and functional requirements. They shall be part of an approved and overall engineering plan for irrigation, drainage, wildlife, recreation, channel improvement, or similar purposes.

Embankments constructed in conjunction with structures covered in this standard which create water impoundments shall meet the design requirements for NRCS FOTG Standard 378, Pond, or NRCS Technical Release 60, (TR-60), Earth Dams and Reservoirs, as applicable.

The ungated capacity of lake outlet water control structures located in channels shall be equal to or greater than the design or bank-full capacity of the channel.

B. Lake Outlet Control Structures

Lake outlet structures shall provide an equal or greater capacity than was present prior to installation of the water control structure.

Auxiliary spillway and freeboard capacity shall conform to criteria in TR-60 or FOTG Standard 378, Pond, as applicable.

C. Protection of Earth Surfaces

If soil and climatic conditions permit, a protective cover of vegetation shall be established on all disturbed earth surfaces. Seeding, fertilizing, and mulching shall comply with NRCS FOTG Standard 342, Critical Area Planting.

If soil or climatic conditions preclude the use of vegetation and protection is needed, nonvegetative means, such as mulches or gravel, may be used.

VI. Plans and Specifications

Plans and specifications for installing structures for water control shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

The plans shall include the location, grades, dimensions, material, hydraulic requirements and structural components for the individual structure.

VII. Operation and Maintenance

An Operation and Maintenance Plan shall be developed with the landowner or operator that is consistent with the purposes of this practice, intended life of the components, and criteria for design.

VIII. References

USDA, NRCS Wisconsin Field Office Technical Guide, Section IV, Conservation Practice Standards and Specifications.

USDA, NRCS Technical Release 60, Earth Dams and Reservoirs.